

Ranking the Risk of Overbuilding in Commercial Real Estate Markets

This paper focuses on identifying markets vulnerable to overbuilding. The identification process involves comparisons or rankings of current market activity indicators across markets and across commercial property segments. The main objective of this analysis is to prioritize research and analysis efforts conducted by the FDIC's Division of Insurance going forward. Examples of these efforts include in-depth market studies, analysis of geographic commercial real estate credit exposures, and surveys of specific underwriting practices within riskier markets.

Revisiting the Risks of Overbuilding

History clearly demonstrates the importance of oversupply in commercial real estate markets. During the 1980s and early 1990s, banks and thrifts experienced heavy losses related in large part to overbuilding in markets such as New England, Texas, and Southern California. As shown in the *FDIC's History of the Eighties* project, banks that failed during that period had higher relative levels of commercial real estate loan exposures than banks that survived.¹

The economic consequences of too much supply of commercial property are straightforward. When supply outpaces demand, upward pressure is placed on vacancy rates. Growing volumes of unoccupied space lead in turn to lower rents for newly developed properties and rent concessions for existing properties. Since revenue streams generated by commercial properties serve as the basis of value, lower rents translate into reduced property prices. As revenues fall below levels sufficient to service operating expenses and outstanding debts, loan

defaults begin to increase. Finally, lenders are forced to recognize losses either through foreclosure and sale of distressed properties or through foregone interest revenues if loans are renegotiated to cure defaults.

Why Do Markets Become Oversupplied?

The fundamental task developers face is to make accurate projections of demand for a given property to determine whether the market will both support development and provide a reasonable return on invested capital. With commercial real estate development, however, there is a lag between a project's conception and its completion. In the case of office buildings and hotels, this lag can be substantial.

Developers nevertheless make decisions based on projections weighted heavily toward recent sales and rental trends. If the market in question is experiencing unsustainable growth (a "boom" period for example), then such projections are likely to lead to an overly optimistic outlook for future demand. The degree of error in forecasted demand may very well be a function of current growth in demand—the greater the growth rate, the larger the margin of forecast error due to optimistic expectations.² Projections also may fail to account for the planned development activities of competitors.

If a developer's demand projections fail to materialize, the result is an overhang of commercial property beyond what the market can absorb during a reasonable time frame. Easy access to investment capital can exacerbate overproduction of space by reducing or eliminating borrower or developer

incentives to make reasoned and prudent investment decisions.³ Excessive leverage, where the developer has little personal capital at risk, is a familiar example often associated with the excesses of the 1980s.

Assessing a Market's Vulnerability to Overbuilding

This study employed a three-step process to rank the vulnerability of markets to possible overbuilding. First, major metropolitan markets were ranked in terms of current construction activity⁴ relative to existing space for each of five property types: office, industrial, retail, hotel, and apartment. Second, relative construction activity was compared to current vacancy rates to assess the competitive pressures faced by newly developed projects. Third, market-related research was reviewed to determine which markets analysts consider candidates for possible supply/demand imbalances.

Supply Focus

In simplest terms, overbuilding occurs when demand fails to keep pace with new supply. Although not discounting the importance of the demand side of this equation, the rankings shown in this paper focus primarily on supply for the following reasons:

- 1) Projections of supply are perhaps more reliable than demand forecasts because market participants know with some degree of certainty what projects are in process and how long it will

take to complete them. Demand forecasts rely more on a variety of assumptions including employment growth, the general rate of economic growth, and forecasted rental rates.

- 2) For certain property types, market performance may be more closely linked to long-term supply trends than shorter-term fluctuations in demand.⁵ Chart 1 illustrates these trends nationally for the office sector, in which long-term cyclical patterns in completion rates appear to be leading indicators of patterns in office vacancy rates.
- 3) Knowledge of trends in demand factors such as employment rates and local business conditions may substantially alleviate potential overbuilding concerns in some markets. Still, such projections are subject to error, particularly if economic conditions deteriorate suddenly (a "boom-bust" scenario, if you will). For the sake of conservatism, this analysis does not rely on absorption projections. In essence, this analysis asks how much space will markets have to absorb in the near term if demand projections fall short of expectations?

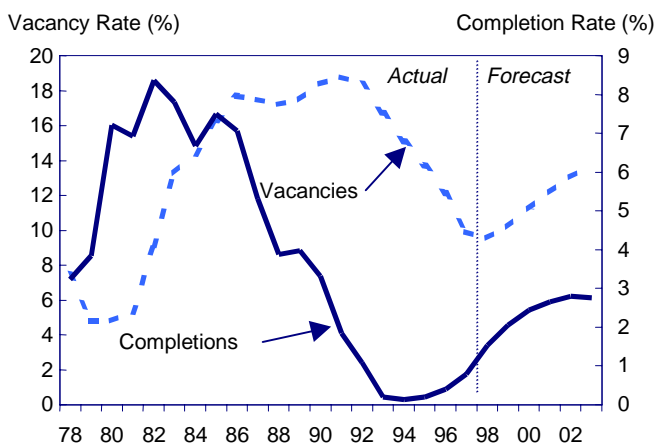
Limitations of the Analysis

The rankings presented in this paper are limited to major metropolitan markets as defined by two primary data sources: **CB Commercial/Torto Wheaton Research (CB Commercial)** for office and industrial markets, and **F.W. Dodge** for all other property types. Markets covered and underlying market definitions employed are not consistent between these two sources. Furthermore, the two sources use different methodologies to define construction activity in progress (see endnote 4). A third source, **ERE Yarmouth**, was used to determine aggregate measures of construction activity for hotel and multifamily or apartment space. No attempt was made to reconcile these three different approaches.

Another limitation in these rankings is the lack of differentiation between suburban and downtown markets. In general, suburban markets have experienced much stronger development during the nationwide real estate recovery and therefore may

Chart 1

Office Completions Lead Vacancy Rates

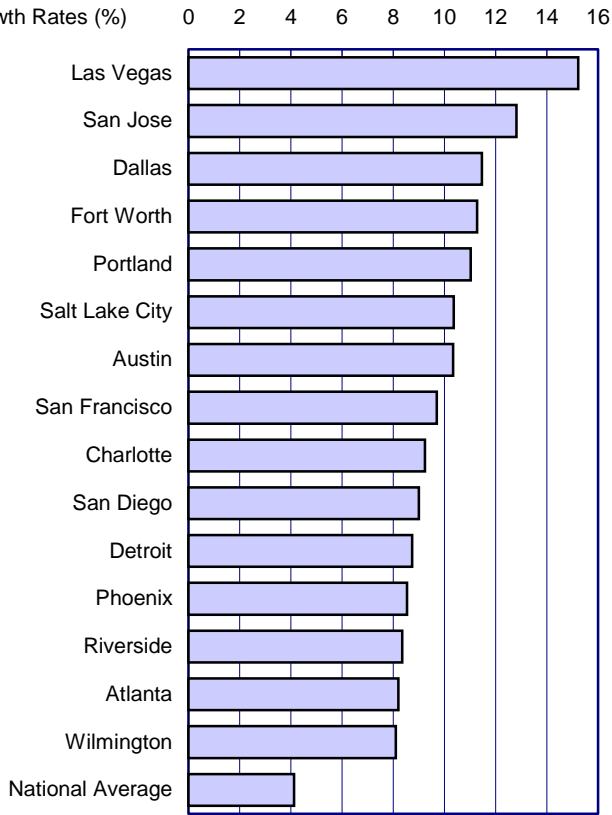


Source: CB Commercial/Torto Wheaton Research

Chart 2

Highest Construction Employment Growth

'94-'97 Annualized Growth Rates (%)



Source: Bureau of Labor Statistics

experience oversupply conditions earlier than downtown markets.

Finally, insufficient data exist to differentiate speculative⁶ from nonspeculative construction activities. Ranking markets on the basis of the relative levels of speculative development would likely form a much clearer picture of where excesses are occurring. In this regard, the author relied on market analysts to gauge the relative level of speculative construction taking place in a given market.

Construction Employment Growth Is an Overall Indicator

Various indicators can be used to identify active real estate markets. Construction employment growth is especially relevant because it directly measures the change in labor resources allocated to the construction sector. Chart 2 ranks the top 15 markets in terms of their respective three-year compounded average construction employment growth. As will be

echoed throughout this paper, Las Vegas stands out with over a 15 percent average annual growth rate. Other markets with rapidly growing construction sectors include San Jose, Dallas, Fort Worth, Portland, Salt Lake City, and Austin.

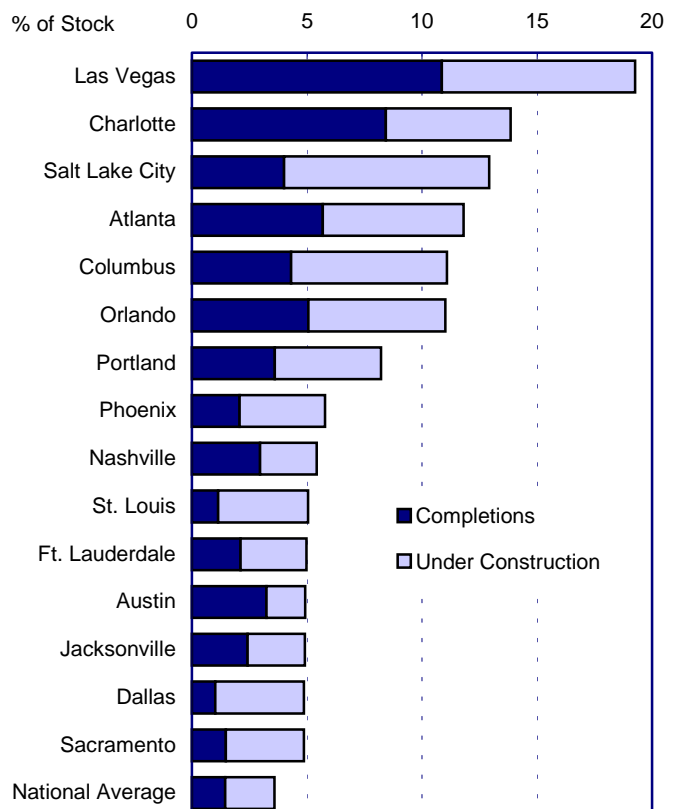
Rankings Based on Construction Activity

Charts 3 through 7 show the level of construction activity relative to the total stock of space at the end of 1997 for the top 15 major metropolitan markets in each of five property categories: office, industrial, retail, hotel, and apartment. Las Vegas is by far the most active construction market in hotel, office, and industrial. Orlando is higher in retail but Las Vegas is a close second. Other markets undergoing rapid development across multiple property types include Salt Lake City, Charlotte, Atlanta, Portland, Phoenix, and Orlando.

There are other markets worth mentioning where rapid development is centered mainly within a single

Chart 3

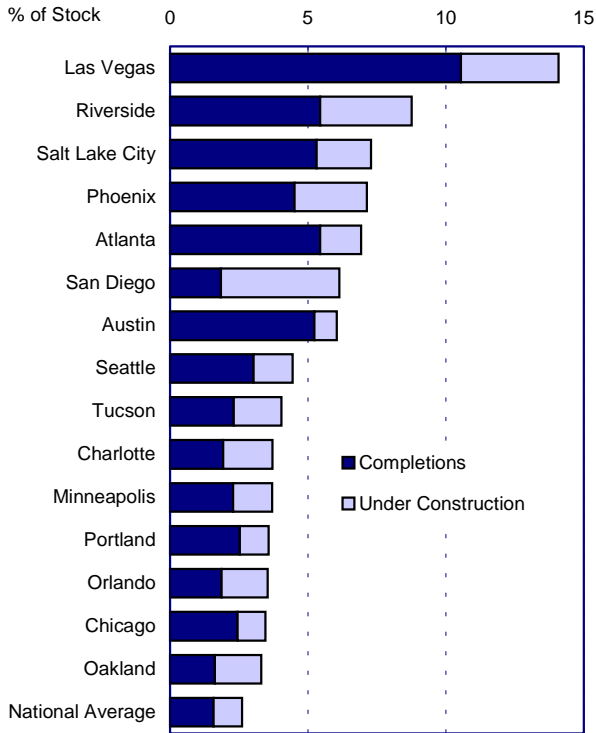
Top 15 Office Construction Markets



Source: CB Commercial/Torto Wheaton Research

Chart 4

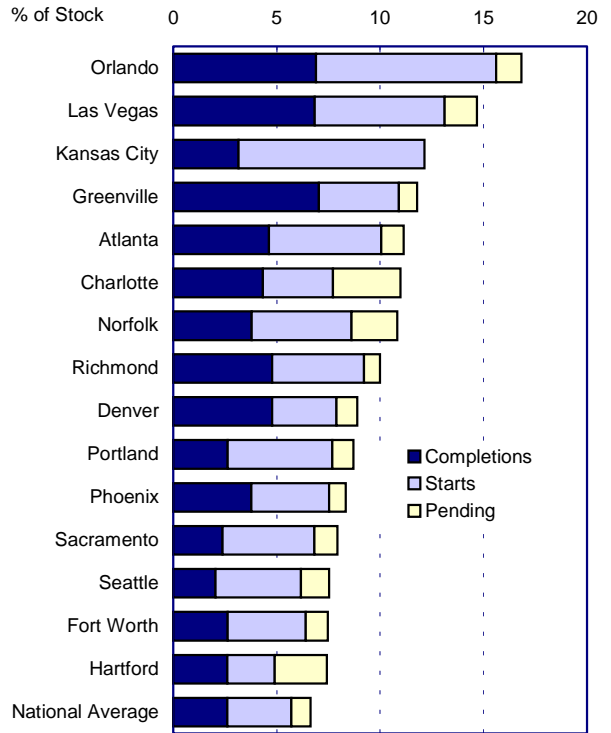
Top 15 Industrial Development Markets



Source: CB Commercial/Torto Wheaton Research

Chart 5

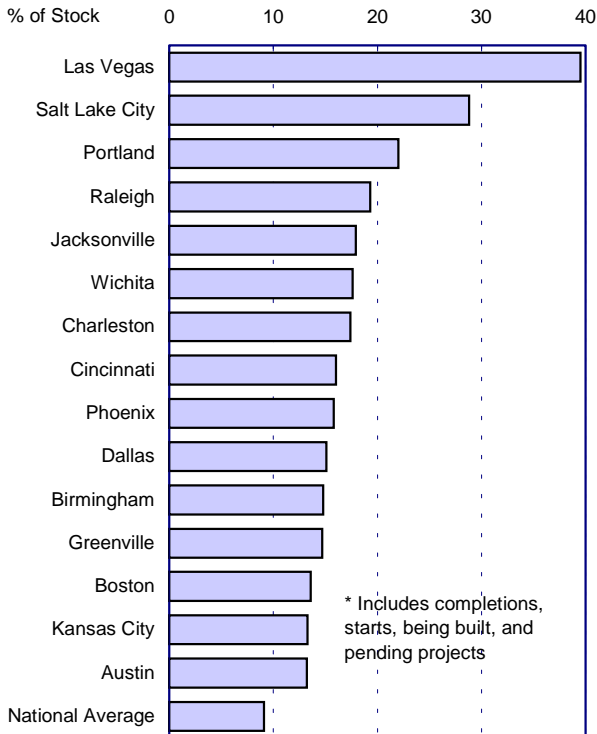
Top 15 Retail Development Markets



Source: F. W. Dodge

Chart 6

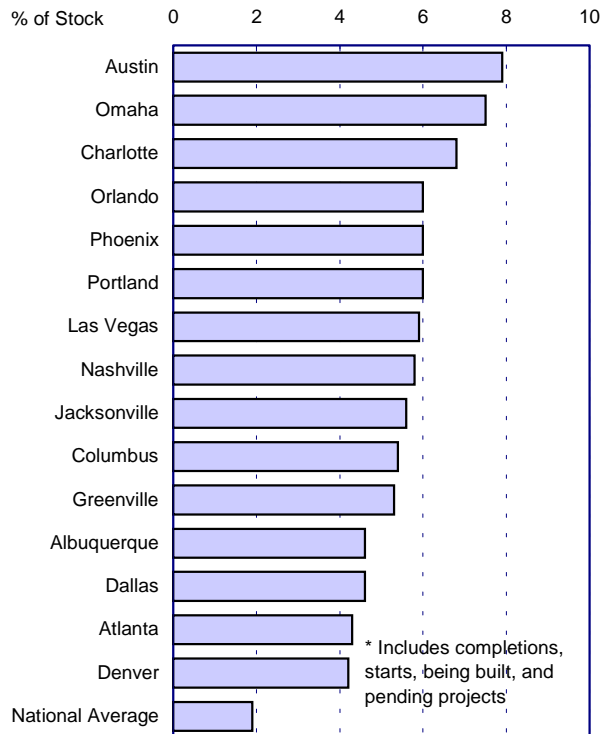
Top 15 Hotel Development Markets*



Source: ERE Yarmouth, F. W. Dodge

Chart 7

Top 15 Apartment Development Markets*



Source: ERE Yarmouth, F. W. Dodge

property segment. For example, Columbus, Nashville, and St. Louis all have office construction activity well above the national average. In addition, markets such as Kansas City, Greenville, Norfolk, and Denver are experiencing rapid development in retail. Many analysts consider retail to be overbuilt, particularly in the regional and power center formats.⁷

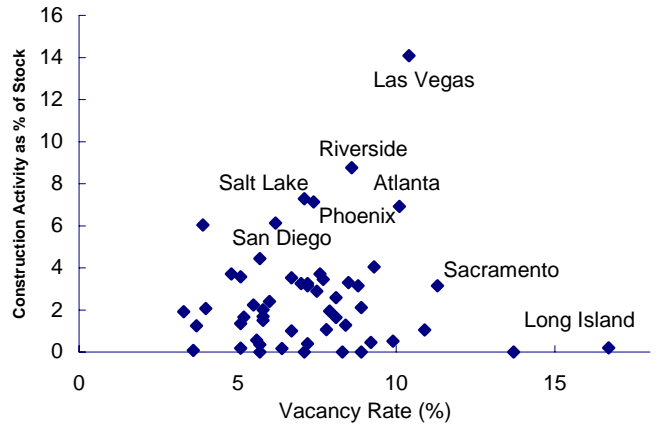
It is instructive to compare the rates of current development across property types. Nationwide, the hotel sector has the highest level of construction activity, at 9.1 percent of existing stock, followed by retail at 6.6 percent. Apartment development has the lowest level of activity at 1.9 percent.

Over the past few years, the pace of hotel development has jumped considerably in markets across the country. Although much of this construction is justified because minimal development took place during the early 1990s, some analysts have warned about the potential for overbuilding, particularly in the limited-service or low- to mid-priced segment.⁸

Comparing Construction Activity to Vacancies

Levels of commercial property development should not be viewed in isolation from existing available space. Accordingly, it is worthwhile to compare construction activity to current vacancy rates (as shown in Charts 8 through 10) for office, industrial, and retail space.⁹ The main idea behind these charts is that market segments with high existing vacancy rates raise the degree of competitive pressures for

Chart 9
Industrial Development Versus Vacancy Rates

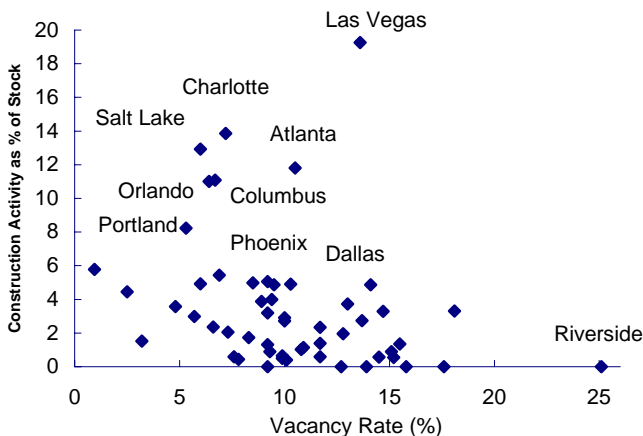


Source: CB Commercial/Torto Wheaton Research

newly built space; markets with high vacancies may have less justification for continuing increases in new stock.

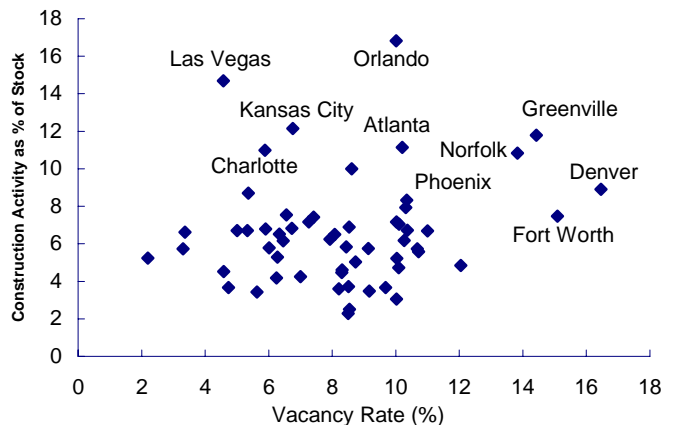
As these charts show, Las Vegas stands out in both office and industrial as having the highest level of new development combined with relatively high existing vacancy rates. Although its pace of development is markedly slower, Atlanta’s real estate markets also appear to be expanding rapidly despite high vacancy rates. With regard to the retail sector, a number of markets, including Orlando, Atlanta, Greenville, Norfolk, Phoenix, Denver, and Fort Worth, exhibit a combination of rapid construction activity and relatively high existing vacancy rates.

Chart 8
Office Development Versus Vacancy Rates



Source: CB Commercial/Torto Wheaton Research

Chart 10
Retail Development Versus Vacancy Rates



Source: F.W. Dodge

Considering the Opinions of Market Analysts

Except for isolated property segments such as power and regional retail and limited-service hotel space, analysts are generally upbeat about overall prospects for real estate markets in the near term. Vacancy rates continue to decline in most major markets, and most property segments are commanding good investment returns. Nevertheless, market-watchers are becoming increasingly cautious about the longer-term outlook in various markets, particularly in light of the rapid increase in development for various property types. **Cushman & Wakefield**, for example, recently pointed to “early warning signs” of potential overbuilding in office space in suburban areas such as Atlanta and Dallas.¹⁰ Analysts recently have noted a large increase in planned office space across various metropolitan markets as indicating an eventual rise in vacancy rates. For instance, a **Lehman Brothers** study identifies 11 markets as “danger zones” based on significant projected increases in vacancy rates over the next two years.¹¹ In many cases, a predominant volume of planned space will be constructed on a speculative basis.

Markets Most Vulnerable to Overbuilding

Based on the preceding information, including analyst opinions concerning specific metropolitan areas, the following markets are considered most vulnerable to broad-based overbuilding.

Las Vegas

By almost any measure, Las Vegas is the most active construction market in the country and perhaps the most vulnerable to overbuilding. Driven by its gaming sector, Las Vegas dwarfs all other markets in new development of office, industrial, and hotel space. At the same time, the city’s relatively high office and industrial vacancy rates place additional competitive burdens on newly completed space. Despite historically strong employment growth trends, the rapid pace of construction activity in virtually all property sectors is highly suggestive of speculative development. Moreover, the city would be especially hard hit by a downturn in real estate prices since fully 10 percent of Las Vegas is employed in the construction sector (twice the national rate). Early evidence suggests that rapid development may already be taking a toll as second quarter 1998 office vacancy

rates rose sharply during the quarter from 13.0 percent to 15.3 percent.¹² Some analysts expect further weakening resulting from a recent slowdown in employment growth.

Atlanta

Of the nation’s largest metropolitan markets, Atlanta’s construction activity ranks among the top five in office, industrial, and retail, with ratios of construction activity to current space of 12 percent, 7 percent, and 11 percent, respectively. Development, a large proportion of which is speculative, is very active despite relatively high vacancy rates in each of these property segments. Real estate investment trusts control a large percentage of the office and industrial market in Atlanta and are contributing factors to the rapid pace of construction. Atlanta’s real estate markets have been driven largely by a rapidly expanding population (trailing only Las Vegas and Phoenix) and strong employment growth. While analysts expect these trends to continue, vacancy rates in apartment and office are projected to rise due to even faster supply growth projections.¹³

Salt Lake City

Salt Lake City ranks among the top three markets in the nation in office, industrial, and hotel development, with ratios of construction activity to current space of 13 percent, 7 percent, and 29 percent, respectively. Rapid development is being driven by high-tech corporate expansions, population in-migration, and the city’s preparation for the 2002 Winter Olympic Games. Despite relatively low current vacancy rates and strong employment sector growth, analysts have warned of a potential glut of office and hotel space. Some analysts have projected significant increases in office vacancy rates over the next two years.¹⁴

Charlotte

Charlotte is home to banking powerhouses such as NationsBank and First Union. The city’s rapidly expanding finance sector has spurred a significant level of development activity. Charlotte ranks among the top 10 metro areas in office, industrial, retail, and apartment development, with ratios of construction activity to current space of 14 percent, 4 percent, 11 percent, and 7 percent, respectively. **CB Commer-**

cial forecasts a significant rise in office vacancy rates over the next two years as newly completed space outpaces absorption. Due to the employment make-up of the city, Charlotte's real estate markets are highly dependent on the health of the financial industry.

Portland

Portland ranks among the top 10 metro areas in office, retail, hotel, and apartment development, ratios of with construction activity to current space of 8 percent, 9 percent, 22 percent, and 6 percent, respectively. Portland's expanding markets have been driven to a large extent by in-migration and a rapidly growing technology sector. The market reportedly has a large number of speculative office and industrial projects in the planning or initial construction phases. Moreover, although the city's apartment market may already be saturated, apartment development continues at a brisk pace.¹⁵

Phoenix

After Las Vegas, Phoenix has the second largest population growth rate in the nation. It ranks among the top 10 metro markets in office, industrial, hotel, and apartment development, with ratios of construction activity to existing space of 6 percent, 7 percent, 16 percent, and 6 percent, respectively. Retail development ranks eleventh in the nation despite a relatively high retail vacancy rate. Phoenix's strong employment growth is encouraging increased speculative office development, and apartment construction has saturated the market in some submarkets.¹⁶

Markets Exhibiting Rapid Development in a Specific Sector

In addition to the above markets whose development activities are fairly broad-based, the markets discussed below are vulnerable to overbuilding within a specific property sector:

Retail. Most analysts feel that the nation's retail markets as a whole are overbuilt. Still, a number of markets are undergoing rapid development despite high existing retail vacancy rates.

- **Orlando's** retail market is developing more rapidly than any other metro area, with

construction activity at 17 percent of existing stock. According to research by **CB Commercial**, the current stock of space in Orlando is 4.1 percent above the level needed to maintain constant real rents.¹⁷ Moreover, **CB Commercial** projects 1998 through year 2000 retail completions of 6.8 million square feet, exceeding projected demand of 4.5 million square feet.

- **Kansas City** has the third highest rate of retail development, with construction activity at 12 percent of existing space. During 1997, the city had retail completions of 1.7 million square feet (fourth quarter estimated), which exceeded estimated demand of 513,000 square feet (fourth quarter estimated) by 3.3 times.
- **Denver** has the ninth highest rate of retail development, with construction activity at 9 percent of existing space. This pace of construction is particularly high considering a 17 percent inventory of available retail space. **CB Commercial** projects 1998 through year 2000 retail completions at 5.4 million square feet, well in excess of projected demand of 400,000 square feet.
- **Fort Worth** had the fourteenth highest rate of retail development, with construction activity at 9 percent of existing stock. This pace of development is high considering an already high retail vacancy rate of 15 percent. **CB Commercial** calculates that the stock of existing space is 1.1 percent above equilibrium levels.
- Smaller metro markets experiencing rapid retail development include **Greenville** and **Norfolk**, both of which also have high vacancy rates.

Office. Unlike the retail sector, which according to many market observers may be in the latter stages of a development cycle, growing development rates in the office sector are a fairly recent phenomenon. Still, even at this early stage, the rapid pace of office development in some markets has led analysts to warn of possible oversupply.

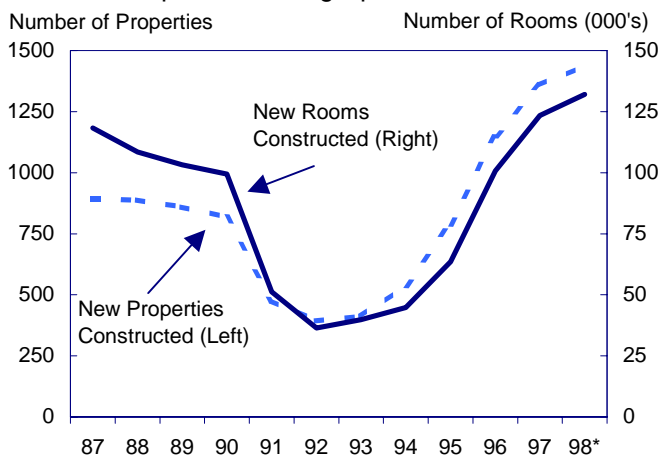
- **Columbus** ranks fifth among all metro markets in office development, with construction activity

at 11 percent of existing stock. Much of the development under way is speculative, and **CB Commercial** projects a sharp rise in vacancy rates over the next two years, with expected completions of 1.2 million square feet as compared to expected absorption of only 349,000 square feet.

- **Nashville** ranks ninth among all metro markets in office development, with construction activity at 6 percent of existing stock. It may be difficult for the city's office market to absorb the space coming on line given a modest increase in vacancy rates from 6.4 to 7.2 percent in the second quarter of 1998. Moreover, **CB Commercial** projects a sharp rise in vacancy rates over the next two years, with expected completions of 1.1 million square feet as compared to expected absorption of only 128,000 square feet.

Hotel. The pace of hotel development has picked up substantially over the past two years to levels not seen since the late 1980s (see Chart 11). Much of this development is likely related to pent-up demand given the dearth of hotel development activity through the early 1990s. Nevertheless, the hotel sector should be watched with some caution because of the higher risks generally associated with this property type (longer construction periods and greater vulnerability to economic downturns, for example). Some analysts already have sounded warnings of potential overbuilding in the limited-service segment.

Chart 11
Hotel Development Heating Up*



Source: Smith Travel Research

* March 1998 Annualized

Conclusion

This paper identifies rapidly growing commercial real estate markets where analysts have warned of potential overbuilding. In some cases, the concerns encompass all development within a particular market; in other cases, concerns involve only a specific property type such as retail or office space. Some property types in general, such as retail and hotel, also should be monitored closely due to emerging and existing supply/demand imbalances.

As this paper illustrates, a number of U.S. markets are experiencing rapid growth in commercial property development. Much of this development is occurring in small to mid-sized markets, many of which did not participate in the large-scale real estate downturn of the late 1980s and early 1990s. Although a “boom-bust” scenario is not imminent for these areas, there is a heightened degree of concern over the rapid development and related growth in construction loan concentrations occurring within these markets.

Endnotes

¹ Freund et al., *History of the Eighties: Lessons for the Future*, FDIC 1997, 1: 158–159.

² Liang, Youguo, and John Kim, “The Office Market Cycle: There’s Hope This Time,” *The Real Estate Finance Journal*, Fall 1997, p. 39.

³ See fourth quarter 1997 and first quarter 1998 editions of FDIC’s *Regional Outlook* for more information on current commercial real estate financing trends.

⁴ Construction or “pipeline” activity generally refers to recent completions plus projects in process of being built. More specific definitions of “pipeline” must be interpreted within the context of the data sources referenced. In the case of office and industrial properties, the source of data is CB Commercial/Tortoise Wheaton research in which pipeline is defined as space completed during 1997 or known to be under construction at the end of 1997. For retail, the source is F.W. Dodge and pipeline is referred to as space completed in 1997, construction started in 1997, and “pending projects.” F.W. Dodge defines pending projects as those that are either in the final planning or bidding stage. For hotel and apartment, the source is ERE Yarmouth, and pipeline is referred to as completions, projects in process of being built, starts, and pending projects.

⁵ See Introduction to CB Commercial/Tortoise Wheaton Research’s *Office Outlook*, Spring 1998, pp. II.1 to II.6, and Wheaton, William, and Lawrence Rossoff, “The Cyclical Behavior of the U.S. Lodging Industry,” *Real Estate Economics*, 1998, 26, 1: 67–82.

⁶ The term speculative here indicates projects undertaken absent a meaningful degree of preleasing or presales.

⁷ See, for example, CB Commercial/Torto Wheaton Research's *Retail Outlook*, Spring 1998, pp. II.1 to II.4, and Urban Land Institute's *ULI 1998 Real Estate Forecast*, pp. 40-41.

⁸ See, for example, Urban Land Institute's *ULI 1998 Real Estate Forecast*, pp. 36-37, and lender comments in the "Lenders in Hotel Finance and Development" section by Mark Faris in *Commercial Property News*, August 16, 1998, pp. 16-20.

⁹ Insufficient data were available to produce comparable charts for hotels and apartments.

¹⁰ As quoted in the *Wall Street Journal* in an article by Mitchell Pacelle, "Suburban Office Vacancies on the Rise," April 29, 1998.

¹¹ These markets are Salt Lake City, Columbus, Nashville, Charlotte, St. Louis, Atlanta, Baltimore, Las Vegas, Indianapolis, Dallas, and Miami. See Lehman Brothers' *Commercial REIT Research: Eye on Office Markets*, by Steve Hash and Michele Martin, May 5, 1998.

¹² Based on second quarter 1998 *CB Richard Ellis Pre-audit Office Vacancy Index*.

¹³ Refer to FDIC's *Bank Trends* June 1988 issue (98-06) entitled "Metropolitan Atlanta Construction and Development Trends," by Jack Phelps et al., for an in-depth analysis of the Atlanta metropolitan real estate market.

¹⁴ See, for example, CB Commercial/Torto Wheaton Research's *Office Outlook*, Spring 1998, and Lehman Brothers' *Commercial REIT Research: Eye on Office Markets*, May 5, 1998.

¹⁵ Refer to "Market Snapshot" comments in ERE Yarmouth's *Real Estate Outlook: 1998*.

¹⁶ See note 15.

¹⁷ By way of comparison, the national retail market is 3.8 percent above equilibrium levels. See CB Commercial/Torto Wheaton Research's *Retail Outlook*, Spring 1998.

References

- Burton, Steven. Federal Deposit Insurance Corporation. 1998. Trends in commercial real estate loan pricing and underwriting. *Regional Outlook*, First Quarter.
- Burton, Steven, and Ternullo, Gary. Federal Deposit Insurance Corporation. 1997. Strong demand and financial innovation fuel rebounding commercial real estate markets. *Regional Outlook*, Fourth Quarter.
- CB Commercial/Torto Wheaton Research. 1998. *Office Outlook*, Spring.
- CB Commercial/Torto Wheaton Research. 1998. *Industrial Outlook*, Spring.
- CB Commercial/Torto Wheaton Research. 1998. *Retail Outlook*, Spring.
- CB *Richard Ellis Pre-Audit Office Vacancy Rate Index*, Second Quarter 1998.
- ERE Yarmouth. 1998. *Real Estate Outlook: 1998*.
- Faris, Mark. 1998. Sales count on E Walk's cost, uniqueness to limit entrance of competing projects. *Commercial Property News*, 16 August.
- Freund, James, et al. Federal Deposit Insurance Corporation. 1997. *History of the Eighties: Lessons for the Future*, vol. 1.
- F.W. Dodge. 1998. *Real Estate Analysis and Planning Service: 4th Quarter 1997*.
- Hash, Steve, and Martin, Michele. 1998. Lehman Brothers. *Commercial REIT Research: Eye on Office Markets*, May.
- Liang, Youguo, and Kim, John. 1997. The office market cycle: There's hope this time. *The Real Estate Finance Journal*, Fall.
- Pacelle, Mitchell. 1998. Are developers forgetting the lessons of the real-estate bust of the early 1990s? *Wall Street Journal*, April 29.
- Phelps, Jack, et al. Federal Deposit Insurance Corporation. 1998. Metropolitan Atlanta construction and development trends. *Bank Trends*, June.
- Urban Land Institute. 1998. *ULI 1998 Real Estate Forecast*.
- Wheaton, William, and Rossoff, Lawrence. 1998. The cyclical behavior of the U.S. lodging industry. *Real Estate Economics*, vol. 26.

About the Author

Steven Burton is a senior banking analyst in the Depository Analysis Section of the Division of Insurance.

About the Division of Insurance

The Division of Insurance (DOI) was created in 1995 to identify, analyze, and report on existing and emerging risks to the banking industry and depository insurance funds. Arthur J. Murton is Director of DOI.

About *Bank Trends*

Bank Trends is a series of occasional papers published by the Division of Insurance. The papers address current issues in banking, economics, and finance as they relate to exposures to the banking system and deposit insurance funds. These analyses are available free of charge on the FDIC's website at www.fdic.gov. Requests for copies also can be made to

FDIC, Public Information Center
801 17th Street, N.W., Room 100
Washington, D.C. 20434
Phone: 800-276-6003 or 202-416-6940
FAX number: 202-416-2076

Other DOI Products

Regional Outlook is published quarterly by each of the FDIC's eight Regions and explores potential risks and trends affecting insured depository institutions from a Regional and national perspective. These publications and other products are available on the FDIC's website at www.fdic.gov.

Disclaimer

The views expressed in this article are those of the author(s) and do not necessarily reflect the official position of the Division of Insurance or the Federal Deposit Insurance Corporation.